

CLAIMS

5 1. A method for creating an XML document for publishing using object dependency graph comprising:

defining an XML document based upon one or more reusable content objects, whereby at least one of the content objects includes at least one relationship with another content object and the relationship has been identified with at least one graph;

10 building the XML document so as to form to an aggregate XML document which represents a self-contained accumulation of the one or more content objects in accordance with the at least one relationship; and

invoking an XSL transformation engine to produce one or more viewable output pages.

15 2. The method according to claim 1, wherein the step of invoking an XSL transformation engine includes invoking an XSL transformation engine to produce viewable output pages in HTML.

20 3. The method according to claim 1, wherein the step of defining an XML document based upon one or more reusable content objects includes defining an XML document based upon one or more content objects comprising at least one of fragment or servable.

25 4. The method according to claim 3, wherein the step of defining an XML document based upon one or more content objects comprising at least one of fragment which is a self-contained fragment.

5. The method according to claim 3, wherein the step of defining an XML document based upon one or more content objects comprising at least one of fragment which is a compound fragment.

**EXPRESS MAIL LABEL NO.: EL746146607US**

Sub A17 6. The method according to claim 3, further comprising the step of publishing the one or more viewable output pages.

5 7. The method according to claim 6, wherein in the step of publishing includes publishing the one or more viewable output pages as Web pages or publishing the one or more viewable output pages to other media or devices.

10 8. The method according to claim 1, wherein the step of defining an XML document based on one or more reusable content objects comprising one or more fragments including compound objects and further comprising includes the sub-steps of:

partitioning at least some fragment of the plurality of fragments into a plurality of group such that if two compound fragementts are constructed from at least one common changed fragment, then the compound fragments are placed in a same group; and publishing all fragments belonging to a same group together.

Sub A 17 9. A method for creating an XML document for publishing using object dependency graphs comprising:

identifying one or more content objects comprising servables and fragments for constructing a web page based on input received from one or more of the following:

- 5 (i) information analysis and modeling  
(ii) target audience analysis  
(iii) target device analysis; and  
(iv) workflow and role analysis

10 creating one or more document templates that define the structure of the servables and of the fragments;

creating one or more stylesheets that determine the presentation and layout of the information in each servable for each target audience and each target device;

saving the document as a XML file and save meta information describing each of the servables and the fragments;

15 updating an object dependency graph based upon one or more reusable content objects, whereby at least one of the content objects includes at least one relationship with another content object and the relationship has been identified with at least one graph; and

20 building an XML document so as to form to an aggregate XML document which represents a self-contained accumulation of the one or more content objects in accordance with the at least one relationship.

10. The method according to claim 9, further comprising the step of :

invoking an XSL transformation engine to produce one or more viewable output pages.

25 11. The method according to claim 10, wherein the step of invoking an XSL transformation engine includes invoking an XSL transformation engine.

Sub A 17 12. The method according to claim 9, wherein the step of creating one or more document templates that define the structure of the servables and of the fragments includes the sub-steps of:

5 receiving a search request from a user for searching metadata information that describes preexisting servables and fragments that can be used in creating the document; and

receiving a selection from a user to include preexisting servable and fragments in the document based on the metadata searched.

10 13. The method according to claim 12, further comprising the sub-step of:

receiving a user request to create a new document template; and  
creating a blank form for holding one or more content objects.

14. The method according to claim 12, further comprising the sub-step of:

receiving a user request for edit a preexisting document template; and  
retrieving a preexisting document according to the user request received.

15. The method according to claim 9, wherein the step of saving the document as a XML file and save meta information describing each of the servables and the fragments includes saving any attachments to the document.

25 16. The method according to claim 15, wherein the step saving the document includes saving any attachments to the document selected from the group of attachments selected from the group of attachments consisting of text files; video files, still images, stylesheets, and multimedia data.

17. An information processing system for creating an XML document for publishing using object dependency graphs comprising:

a dispatcher servlet for managing the following:

an interface for file system for storing a plurality of reusable content objects;

an metadata interface to a database for storing metadata that describes each of the plurality of reusable content objects;

a file system interface to a content editor for receiving using input to define an XML document based upon one or more reusable content objects store in the file system, at least one of the content object includes at least one relationship with another content object and the relationship has been identified with at least one graph; and

a content manager interface to a page assembler for building the XML document so as to form to an aggregate XML document which represents a self-contained accumulation of the one or more content objects in accordance with the at least one relationship.

18. The information processing system according to claim 12, wherein the content manager interface to a page assembler includes a dependency parser for analyzing the one or more reusable objects based on the composition dependencies for the structural information between fragments and style dependencies for information regarding stylesheets.

Sub A1 19. A computer readable medium containing programming instructions for execution on an information processing system for create an XML document for publishing using object dependency graphs comprising the programming instructions for:

5 defining an XML document based upon one or more reusable content objects, whereby at least one of the content objects includes at least one relationship with another content object and the relationship has been identified with at least one graph;

building the XML document so as to form to an aggregate XML document which represents a self-contained accumulation of the one or more content objects in accordance with the at least one relationship; and

10 invoking an XSL transformation engine to produce one or more viewable output pages.

20. The computer readable medium according to claim 19, wherein the programming instruction of invoking an XSL transformation engine includes invoking an XSL transformation engine to produce viewable output pages in HTML.

21. The computer readable medium according to claim 19, wherein the programming step of defining an XML document based upon one or more reusable content objects includes defining an XML document based upon one or more content objects comprising at least one of fragment or servable.

22. The computer readable medium according to claim 21, wherein the programming step of defining an XML document based upon one or more content objects comprising at least one of fragment which is a self-contained fragment.

25 23. The computer readable medium according to claim 21, wherein the programming step of defining an XML document based upon one or more content objects comprising at least one of fragment which is a compound fragment.

EXPRESS MAIL LABEL NO.: EL746146607US

24. The computer readable medium according to claim 21, wherein the programming step of publishing the one or more viewable output pages.

25. The computer readable medium according to claim 25, wherein the programming step of publishing includes publishing the one or more viewable output pages as Web pages or publishing the one or more viewable output pages to other media or devices.

26. The computer readable medium according to claim 19, wherein the programming step of defining an XML document based on one or more reusable content objects comprising one or more fragments including compound objects and further comprising includes the sub-steps of:

partitioning at least some fragment of the plurality of fragments into a plurality of groups such that if two compound fragments are constructed from at least one common changed fragment, then the compound fragments are placed in a same group; and publishing all fragments belonging to a same group together.